

Edelbrock/JE Sportsman Pistons

For Harley-Davidson "Big Twin" Evolution® and Twin Cam® Motors INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before installing your new Edelbrock/JE Sportsman Pistons for Harley-Davidson "Big Twin" Evolution® and Twin Cam® Motors. If you have any questions or problems, do not hesitate to contact our Technical Hotline at: 1-800-416-8628, from 7am-5pm, Monday-Friday, Pacific Standard Time, or via e-mail at: Edelbrock@Edelbrock.com.

• Description (Evolution®)

Edelbrock/JE 10.5:1 Sportsman Pistons are designed to take Evolution® Big Twins to the next level of performance. Unlike domed high compression pistons used for "bathtub" shaped chambers, Edelbrock/JE Sportsman Pistons are designed to match the unique combustion chamber of Edelbrock Performer and Performer RPM Evo Big Twin cylinder heads. Edelbrock/JE Sportsman Pistons are the only pistons to use when increasing compression ratios with Edelbrock Heads.

Designed for stock and 3-5/8" bore engines, these pistons accommodate maximum 1.940" intake and 1.625" exhaust valve sizes. Wrist pins are made of heat-treated chrome moly bar stock with rifle-drilled I.D. bores and ground/chamfered ends. Top piston rings are premium iron alloy, plasma moly for superior durability. The second ring is a reverse twist taper design that dramatically reduces "blow by" for more power. The oil ring is a low tension design that offers excellent oil control.

IMPORTANT NOTE: Edelbrock/JE pistons (Evolution®) only work with Edelbrock heads due to the unique dome configuration. (For correct piston orientation, see Figure 1).

Evolution® Big Twin:

Standard Bore (3-1/2").....	#1701*
Standard Bore + .005".....	#1702*
Standard Bore + .010".....	#1703*
Standard Bore + .020".....	#1704*
3-5/8" Bore.....	#1705*
3-5/8" Bore + .005".....	#1706*
3-5/8" Bore + .010".....	#1707*
3-5/8" Bore + .020".....	#1708*

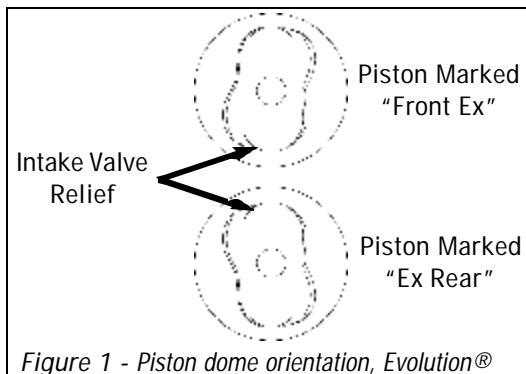


Figure 1 - Piston dome orientation, Evolution®

• Description (Twin Cam®)

Edelbrock/JE 10.25:1 pistons are designed for Twin Cam® motors that have been modified to 95 cubic inches (3-7/8" bore). Edelbrock/JE (Twin Cam®) pistons have a flat-top design (no dome) and can be compatible with all Twin Cam® heads, providing that the valves being used DO NOT exceed 1.940" (intake) and 1.625" (exhaust) in diameter.

IMPORTANT NOTE: Due to the flat top design, all Edelbrock/JE (Twin Cam®) 95" pistons can be used on either front or rear cylinders, and valve reliefs on each piston are marked "Intake" and "Exhaust". (For correct piston orientation, see Figure 2).

Twin Cam®:

3-7/8" Bore (95 cubic inch).....	#3140*
3-7/8" Bore + .005".....	#3141*
3-7/8" Bore + .010".....	#3142*
3-7/8" Bore + .020".....	#3143*

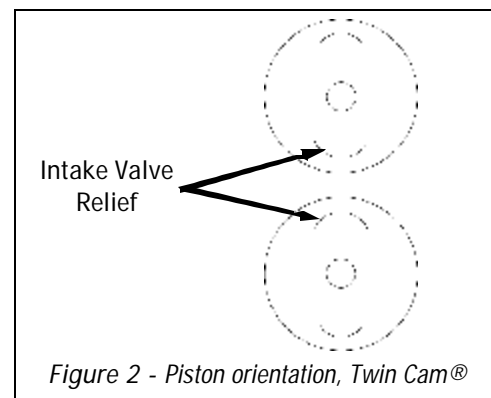


Figure 2 - Piston orientation, Twin Cam®

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INSTALLATION PROCEDURE

Note: All Evolution® “Big Twin” pistons are marked “Front” or “Rear” and come with rings, wrist pins, and locks.

- Note: We highly recommend that a dealer or trained mechanic perform the installation of these pistons. Specialized equipment is required for honing and finishing the cylinders to ensure long life of the piston and cylinder assembly.
1. Remove original equipment cylinders from engine. Refer to a shop manual or other reference book for specific steps, if needed. (Note: Care should be taken not to bend the studs or damage the cylinder during removal of the cylinders.)
 2. With a small screwdriver, move the wrist pin retainer around to gain access to the tail of the retainer as it lines up with the notch in the bottom of the wrist pin hole.
 3. Use a small screwdriver, pick or awl to roll the wrist pin retainer out of its groove.
 4. Push wrist pin out and remove piston.
 5. Repeat procedure for the other piston.
 6. At this point, take cylinders, new pistons, and piston-to-wall clearance specifications to your dealer or machine shop to perform necessary machining operations.
- IMPORTANT NOTE (Evolution® and Twin Cam®): The cylinder bore must be machined/honed to provide .0025" of piston-to-wall clearance. Measure the piston diameter at a point .500" up from the lower skirt (See Figure 3).

7. Starting with the front cylinder, install new piston rings and one wrist pin retaining clip (Note: Second ring has a dot which must face up when the ring is installed).
8. Place the piston over the connecting rod, making sure that the intake valve pocket is towards the intake side. (For Evolution®, see Figure 1. For Twin Cam®, see Figure 2). Coat the wrist pin with engine oil and insert it into the piston. Install the second wrist pin retainer into the groove.
9. Lightly coat the piston skirt with engine oil. Place a piston ring compressor over the piston/ring assembly and compress. Place the cylinder over the piston and gently push down until all rings are in the cylinder. Remove the ring compressor, and push the cylinder the rest of the way down. (Note: Be careful not to get oil onto the base gasket.)
10. Place two nuts and washers on opposite corners of the #1 cylinder to hold it down while you repeat the procedure for cylinder #2.
11. Assemble the rest of the engine per factory specifications. Start the engine and let it run at 2000 rpm for about 10 minutes.

CAUTION: Put a minimum of 200 miles on the new pistons before applying full power.

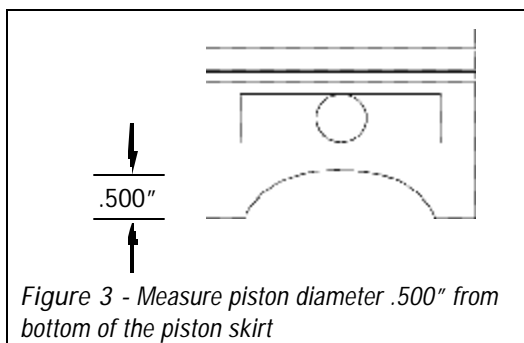


Figure 3 - Measure piston diameter .500" from bottom of the piston skirt

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